

## Appendix 7

### RDB invertebrate species records for the Catfield Fen area obtained from the National Biodiversity Network

In order to better understand the invertebrate community of SSSI Unit 3 the RSPB requested records from the National Biodiversity Network. These resulted in an impressive species list, as set out in the table below. The information will help inform management and monitoring requirements of the site.

| Sutton Fen | Catfield Fen | Ant Valley | Order   | Group                | Scientific name                       | English name    | Status                | Ecology notes   | Last recorded | Distribution notes                     | Ant only |
|------------|--------------|------------|---------|----------------------|---------------------------------------|-----------------|-----------------------|---|---------------|--|----------|
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Agabus (Gaurodytes) striolatus</i> |                 | Vulnerable            | Temporary, shaded pools in carr in the Broad. Cannot fly. | 2004          | Confined to Norfolk                    |          |
| No         | No           | Yes        | Insecta | Beetles (Coleoptera) | <i>Agabus labiatus</i>                |                 | Near Threatened       |   | 2007          |  |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Bidessus unistriatus</i>           | a diving beetle | Critically Endangered |   | 2007          |  |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Dryops anglicanus</i>              |                 | Near Threatened       | Wet veg at edge of fen and carr. Often with tussocks      | 2014          | 15 UK sites                            |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Dytiscus dimidiatus</i>            |                 | Near Threatened       | Rich fen veg, drains and ponds                            | 2003          |  |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Enochrus nigrinus</i>              |                 | Near Threatened       | Mesotrophic base rich fens                                | 2003          |  |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Graphoderus bilineatus</i>         |                 | Extinct               |   | 1906          | Probably no longer present at Catfield |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Graphodorus cinereus</i>           |                 | Vulnerable            | Vegetated pools and ditches                               | 2014          | 3 UK sites. Declining.                 |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Gyrinus suffriani</i>              |                 | Vulnerable            | Edges of reedbeds, shallow runnels, dykes                 | 2014          | Handful UK sites.                      |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Haliphus (Liaphlus) variegatus</i> |                 | Vulnerable            |   | 2007          |  |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Helochares obscurus</i>            |                 | Vulnerable            | Pools in sphagnum   | 2014          | 11 UK sites                            |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Hydraena palustris</i>             |                 | Near Threatened       | Temporary, stagnant water with marginal vegetation.       | 2014          | 14 UK sites                            |          |
| No         | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Hydrochus brevis</i>               |                 | Near Threatened       | Weedy pools and thick fen veg in shade and mud            | 2014          | 25 UK sites                            |          |
| No         | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Hydrochus crenatus</i>             |                 | Near Threatened       | Mossy margins of ponds and in rich fens                   | 2004          |  |          |
| No         | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Hydrochus elongatus</i>            |                 | Near Threatened       |   | 2007          |  |          |
| Yes        | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Hydrochus megaphallus</i>          |                 | Vulnerable            | Shallow pools in sphagnum                                 | 2014          | 5 UK sites                             |          |
| No         | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Hydrochus ignicollis</i>           |                 | Near Threatened       | Thick veg at edge of dykes                                | 2014          | 18 UK sites                            |          |
| No         | Yes          | Yes        | Insecta | Beetles (Coleoptera) | <i>Hydrophilus piceus</i>             |                 | Near Threatened       | Dykes with thick submergent veg                           | 2014          | Fairly widespread but declining        |          |

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|------------|--------------|------------|----------|-------------------------------------|--|--------------------------|------------------------------|---|---------------|--|----------|
| No         | No           | Yes        | Insecta  | Beetles (Coleoptera)                | <i>Hydroporous longicornis</i>         |                          | Near Threatened              |   |               |  |          |
| No         | Yes          | Yes        | Insecta  | Beetles (Coleoptera)                | <i>Hydroporus glabriusculus</i>        |                          | Vulnerable                   | Flooded moss carpets  | 2004          | 12 UK sites  |          |
| Yes        | Yes          | Yes        | Insecta  | Beetles (Coleoptera)                | <i>Hydroporus scalesianus</i>          |                          | Vulnerable                   | Often in neutral or base-rich water, but associated with acidic conditions in Holland. Cannot fly, and is unable to colonise new sites. | 2014          | 16 UK sites  |          |
| No         | Yes          | Yes        | Insecta  | Beetles (Coleoptera)                | <i>Laccornis oblongus</i>              |                          | Near Threatened              | Old fen systems shallow mossy areas of base rich fen  | 2003          |  |          |
| No         | Yes          | Yes        | Insecta  | Beetles (Coleoptera)                | <i>Limnebius aluta</i>                 |                          | Near Threatened              | Edges of pools and muddy ditches, wet moss, litter in fens.   | 2014          | 21 UK sites  |          |
| No         | No           | Yes        | Insecta  | Beetles (Coleoptera)                | <i>Limnoxenus niger</i>                |                          | Near Threatened              |   |               |  |          |
| Yes        | No           | Yes        | Insecta  | Beetles (Coleoptera)                | <i>Quedius (Quedius) balticus</i>      |                          | Endangered                   | Needs litter.   |               |  |          |
| Yes        | No           | Yes        | Insecta  | Beetles (Coleoptera)                | <i>Stenus (Stenus) proditor</i>        |                          | Data Deficient               |   |               |  |          |
| Yes        | No           | Yes        | Insecta  | Bees, ants, and wasps (Hymenoptera) | <i>Odynerus (Spinicoxa) simillimus</i> | fen mason-wasp           | Endangered                   | A mason wasp. Requires bare ground in wetlands.   | 2014          | Confined to <10 coastal sites in Norfolk and Suffolk       |          |
| Yes        | No           | Yes        | Insecta  | Bees, ants, and wasps (Hymenoptera) | <i>Trogus lapidator</i>                |                          | Data Deficient               |   | 2007          | Only recent UK record - Catfield Fen                       | Yes      |
| Yes        | No           | Yes        | Insecta  | Caddis Flies (Trichoptera)          | <i>Agrypnia picta</i>                  |                          | Data Deficient               |   | 2009          | Incorrect record? No Broads records, very rare nationally. |          |
| Yes        | No           | Yes        | Insecta  | Caddis Flies (Trichoptera)          | <i>Erotesis baltica</i>                |                          | Vulnerable                   | Not well known, but no special requirements mentioned.  | 2007          | Very scarce 7 site nationally                              |          |
| Yes        | Yes          | Yes        | Insecta  | Dragonflies (Odonata)               | <i>Aeshna isosceles</i>                | Norfolk Hawker           | Endangered                   | Should only need general fen management. Threatened by sea level rise.  | 2014          | Confined to East Anglia                                    |          |
| Yes        | Yes          | Yes        | Insecta  | Dragonflies (Odonata)               | <i>Coenagrion pulchellum</i>           | Variable Damselfly       | Near Threatened              |   | 2014          | Widespread, increasing                                     |          |
| Yes        | No           | Yes        | Insecta  | Dragonflies (Odonata)               | <i>Cordulia aenea</i>                  | Downy Emerald            | Least concern                |   | 2010          |  |          |
| Yes        | Yes          | Yes        | Insecta  | Dragonflies (Odonata)               | <i>Libellula fulva</i>                 | Scarce Chaser            | Near Threatened              | Pools or slow flowing rivers with not too much shade.   | 2007          | Widespread SE England                                      |          |
| Yes        | No           | Yes        | Mollusca | Molluscs                            | <i>Oxyloma (Oxyloma) sarsi</i>         | slender amber snail      | Vulnerable                   | Emergent vegetation at the edge of lakes and rivers. Could be threatened by over-grazing.   | 2007          | Broads stronghold a few other sites                        |          |
| Yes        | No           | Yes        | Mollusca | Molluscs                            | <i>Segmentina nitida</i>               | Shining Ram's-horn Snail | Endangered                   | Needs appropriate ditch management.   | 2014          | Widespread but scarce S England                            |          |
| Yes        | No           | Yes        | Mollusca | Molluscs                            | <i>Vertigo moulinsiana</i>             | Desmoulin's whorl snail  | Vulnerable at European level |   | 2007          | Widespread SE England                                      |          |
| Yes        | No           | Yes        | Insecta  | Moths and Butterflies (Lepidoptera) | <i>Elachista pomerana</i>              | Fen dwarf                | Endangered                   | In <i>Calamagrostis</i> and probably other grasses in fens.   | 2014          | 3 sites in UK  |          |

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|------------|--------------|------------|-----------|-------------------------------------|---------------------------------|-------------------------|-----------------|--|---------------|---|----------|
| Yes        | No           | Yes        | Insecta   | Moths and Butterflies (Lepidoptera) | <i>Gelechia muscosella</i>      | Grey swallow groundling | Near threatened | Catkins of <i>Salix</i> and <i>Populus</i> in wetlands   | 2008          | 5 UK sites  |          |
| Yes        | Yes          | Yes        | Insecta   | Moths and Butterflies (Lepidoptera) | <i>Limenitis camilla</i>        | White Admiral           | Vulnerable      |  | 2014          | Widespread SE England   |          |
| Yes        | Yes          | Yes        | Insecta   | Moths and Butterflies (Lepidoptera) | <i>Papilio machaon</i>          | Swallowtail             | Near threatened | Feeds on Milk Parsley. This should be favoured by current management.  | 2014          | Confined to Broads. Ant stronghold                              |          |
| Yes        | Yes          | Yes        | Insecta   | Moths and Butterflies (Lepidoptera) | <i>Pelosia obtusa</i>           | Small Dotted Footman    | Endangered      | Old, dense, uncut reedbeds. Some areas will need to be left uncut for this species, but they should not be allowed to become woodland. | 2014          | Confined to Ant Valley and Thurne valley. Big stronghold in Ant |          |
| Yes        | Yes          | Yes        | Insecta   | Moths and Butterflies (Lepidoptera) | <i>Phragmataecia castaneae</i>  | Reed Leopard            | Vulnerable      | In reed stems in permanently wet or seasonally flooded ground.   | 2014          | 2 UK sites. Ant valley stronghold                               |          |
| Yes        | No           | Yes        | Arachnida | Spiders                             | <i>Baryphma gowerense</i>       |                         | Data Deficient  |  | 1988          | A few sites in Wales. Only Ant valley in England                |          |
| Yes        | No           | Yes        | Arachnida | Spiders                             | <i>Carorita paludosa</i>        |                         | Vulnerable      | No recent British records, but unlikely to be found without intensive survey. Sympathetic fenland management should suit.              | 1990          | Confined to Ant Valley  | Yes      |
| Yes        | No           | Yes        | Arachnida | Spiders                             | <i>Clubiona juvenis</i>         |                         | Vulnerable      | In fens and reedbeds, fresh or brackish.   | 2009          | Confined to Broads  |          |
| Yes        | No           | Yes        | Araneae   | Spiders                             | <i>Theridion hemerobium</i>     |                         | Unclassified    |  | 2007          | < 20 sites widely spaced  |          |
| Yes        | No           | Yes        | Insecta   | True bugs (Hemiptera)               | <i>Calligypona reyi</i>         |                         | Data Deficient  |  | 2007          | Incorrect record? No Broads records, very rare nationally.      |          |
| Yes        | No           | Yes        | Insecta   | True bugs (Hemiptera)               | <i>Macrosteles oshanini</i>     |                         | Data Deficient  |  | 1988          | Ant valley and one other UK site                                |          |
| Yes        | No           | Yes        | Insecta   | True bugs (Hemiptera)               | <i>Paraliburnia clypealis</i>   |                         | Data Deficient  |  | 2007          | Confined to Ant valley  | Yes      |
| Yes        | No           | Yes        | Insecta   | True bugs (Hemiptera)               | <i>Microvelia buenoi</i>        |                         | Nationally Rare |  | 2007          | < 10 sites all East Anglia                                      |          |
| Yes        | No           | Yes        | Insecta   | True flies (Diptera)                | <i>Anopheles algeriensis</i>    |                         | Data Deficient  |  | 2007          | 5 UK sites  |          |
| Yes        | No           | Yes        | Insecta   | True flies (Diptera)                | <i>Anticheta brevipennis</i>    |                         | Vulnerable      | Prefers lush vegetation and ditches that have not been cleared for some time. Threatened by too much grazing.                          | 2007          | South England, very localised                                   |          |
| Yes        | No           | Yes        | Insecta   | True flies (Diptera)                | <i>Calamoncosis aspistylina</i> |                         | Data Deficient  |  | 2007          | 3 sites, other 2 in Hampshire and Warwickshire                  |          |
| Yes        | No           | Yes        | Insecta   | True flies (Diptera)                | <i>Cephalops perspicuus</i>     |                         | Near Threatened | Should benefit from general reedbed management.  | 1990          | Very scarce, Broads, Suffolk coast, Pembroke coast              |          |
| Yes        | No           | Yes        | Insecta   | True flies (Diptera)                | <i>Colobaea pectoralis</i>      |                         | Vulnerable      | No specific needs mentioned.   | 1988          | Confined to East Anglia   |          |
| Yes        | No           | Yes        | Insecta   | True flies (Diptera)                | <i>Cryptonevra consimilis</i>   |                         | Vulnerable      | No information in review.  | 2007          | 3 UK sites. (Ant, Chippenham, Wicken)                           |          |
| Yes        | No           | Yes        | Insecta   | True flies (Diptera)                | <i>Dolichopus laticola</i>      | "Broads Dolli fly"      | Endangered      | Not known, but no specific requirements mentioned  | 2007          | Confined to Bure and Ant valley                                 |          |

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|------------|--------------|------------|---------|----------------------|----------------------------------|--------------|-----------------|--|---------------|--|----------|
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Erioptera meijerei</i>        |              | Vulnerable      | General wetland management.                                      | 2007          | Very scarce, a few sites Norfolk and a handful elsewhere     |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Odontomyia angulata</i>       |              | Endangered      | Fens and shallow pools. Seasonal fluctuation might be important. | 2007          | 4 UK sites   |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Odontomyia argentata</i>      |              | Vulnerable      | Rotational ditch cleaning might be important.                    | 2007          | Confined to SE England, scarce                               |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Odontomyia ornata</i>         |              | Vulnerable      | Needs rotational ditch cleaning and shallow margins.             | 2007          | Confined to SE England, scarce                               |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Parhelophilus consimilis</i>  |              | Vulnerable      |  | 1988          | Very rare, scattered sites nationally                        |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Pherbellia argyra</i>         |              | Vulnerable      | Wetlands, where it feeds on snails.                              | 2008          | <10 UK sites   |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Platypalpus pygialis</i>      |              | Data Deficient  |  | 2007          | Only 1 UK record   | Yes      |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Psacadina zernyi</i>          |              | Vulnerable      | Wetlands, where it feeds on snails.                              | 2007          | <20 UK sites   |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Pteromicra leucopeza</i>      |              | Vulnerable      | Shaded ponds and swamps. Feeds on snails.                        | 2007          | <10 UK sites   |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Rhamphomyia breviventris</i>  |              | Vulnerable      | Perhaps in wet woodland and fens.                                | 2007          | Only UK site   | Yes      |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Scathophaga tinctinervis</i>  |              | Vulnerable      | No information in review.  | 2007          | 5 UK sites   |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Stenomicra delicata</i>       |              | Vulnerable      | No information in review.  | 2007          | Only UK site   | Yes      |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Achalcus nigropunctatus</i>   |              | Unclassified    |  | 2007          | Only UK site ever recorded                                   | Yes      |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Antichaeta analis</i>         |              | Nationally Rare |  | 2007          | Very scattered <20 UK sites. Mostly Norfolk                  |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Ditrichophora nectens</i>     |              | Unclassified    |  | 2007          | Very scarce and scattered <10 sites.                         |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Hybomitra muelfeldi</i>       |              | Nationally Rare |  | 2007          | Very scarce and scattered <10 sites.                         |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Notiphila subnigra</i>        |              | Unclassified    |  | 2007          | 2 other UK sites (Norfolk coast and Dorset). A few in Wales. |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Ochthera manicata</i>         |              | Nationally Rare |  | 2007          | Very scarce, Norfolk and Cambridgeshire                      |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Paradelphomyia czizekiana</i> |              | Unclassified    |  | 2007          | New to UK, a couple of other sites too now                   |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Parydra undulata</i>          |              | Unclassified    |  | 2007          | New to UK, 1 other site in Cambridgeshire                    |          |
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Stenomicra cogani</i>         |              | Nationally Rare |  | 2007          | < 10 sites widely spaced                                     |          |

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|------------|--------------|------------|---------|----------------------|-------------------------|--------------|----------------|---------------|---------------|--------------------------|----------|
| Yes        | No           | Yes        | Insecta | True flies (Diptera) | <i>Tetanocera freyi</i> |              | Not classified |               | 2007          | < 20 sites widely spaced |          |